Outside Looking In, Inside Looking Out—Expanding the Concept of Health

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I LIVE MY life in widening circles that reach out across the world.
I might not ever complete this last one but I give myself to it.
—Rilke, Book of Hours (1905)

Rilke’s image of widening circles in many ways describes our progress toward a system in which the notion of health encompasses more dimensions than merely the treatment of illness and disease. We have moved far beyond thinking in terms of individual patients and particular symptoms to considering the myriad factors that shape health. These factors exist where people live, work, play, and learn. They require us to widen our lens to include all that happens before illness occurs, as well as when treatment is needed. We might call this widened view context-based health.

We build a context-based health system through our personal journeys outward, as Rilke describes, especially through our willingness to step beyond our comfort zones into terra incognita to gain new perspective and insight. Rilke’s image tells only part of the story, though. Truly appreciating and integrating context also requires moving inward to incorporate our personal experiences and values. This movement inward combined with movement outward completes a spiral journey. Spirals are common in nature—and perhaps in our nature. We find them in our weather, in hurricanes and tornadoes, in galaxies, in shells, even in trees’ growth rings. They are a force for progress and change. Together, let us explore the nature of such spiral journeys in your and my lives (Fig. 1).

UNDERSTANDING CONTEXT-BASED HEALTH FROM DR ARMSTRONG TO TODAY

We can begin tracing spiral journeys and how they create a comprehensive, context-based view of health with Dr George Armstrong, whom we honor with this lecture. Dr Armstrong’s work took him away from his origins in Scotland to locate his practice in London. There, he pushed the boundaries of his own knowledge, as well as medicine’s knowledge, as he established what would become the modern field of pediatrics. While he personally moved in widening circles, we can also see how he professionally pushed medicine into widening circles. He created his dispensary in the 1760s, a time when one-quarter to one-half of all infants died. Armstrong realized that warming the infants could prevent many of these deaths. Warming was an environmental factor as well as one found in the home; it was in the power of mothers and caregivers more than in treatment administered by physicians. Armstrong also studied hygiene and feeding practices—again, part of the home environment. While he taught the preventative measures he discovered to fellow doctors, he also taught them to those caring for infants in their homes so that they could act before a doctor’s intervention became necessary. Armstrong paid attention to the infants’ environment and acted on his observations to save their lives.

Now, 250 years later, we might call Armstrong an upstreamist, a term used by Dr Rishi Manchanda to describe doctors focused on basic factors contributing to health and well-being. These doctors, like Dr Armstrong, often paddle against the tide of current practice, thinking, and social mores. They consider the social determinants of health—the conditions and behaviors that exist where people conduct their everyday lives, which shape health and health inequalities. The 2 concepts of upstreamist and social determinants describe Dr Armstrong’s contributions in the 18th century and also describe areas of rediscovery needed in contemporary times.

Scores of studies on health outcomes add evidence to the conclusions that doctors like George Armstrong reached. Health disparities appear where there are disparities in income and education. Ill health clusters in vulnerable communities. Internationally, the World Health Organization estimates that 36% of childhood deaths are attributable to environmental causes. At the same time, we have evidence that interventions to change context also change health outcomes. The story of youth smoking is one of these examples. When choosing to smoke became more difficult, through measures like taxes
and removing cigarette vending machines, as well as less socially acceptable, smoking rates fell dramatically. On the opposite side, choosing unhealthy foods and a sedentary lifestyle has become easier. In fact, it is now difficult not to choose these things, as large-portion, high-calorie, and sugary foods have become the norm and jobs requiring physical activity have started to disappear. It is not surprising that obesity rates have rapidly risen in the last 30 years.

Accumulated and accumulating evidence continues to show that upstreamist thinking and addressing social determinants offer the best approach to health. The US Centers for Disease Control and Prevention (CDC) depicts the relationship between social determinants and desired outcomes by degree of impact in a pyramid showing different levels of intervention (Fig. 2). One-on-one counseling and clinical intervention—interventions with the narrowest focus—have the lowest impact at the population level. The highest impacts come by addressing socioeconomic factors such as reducing poverty or hunger, and changing an individual’s environment to make healthy decisions become default decisions, such as what happened with youth smoking.

Child development offers perhaps the most important example of the importance of context. Nobel Prize–winning economists James Heckman and Paul Anthony Lafontaine have shown that interventions made between the ages of 0 and 3 have the most dramatic effect on learning (Fig. 3) and in turn on outcomes like income, social skills, willpower, and perseverance—the types of factors that make up the CDC’s foundation of good health. Investments made later have an impact, but with diminished returns. How prescient George Armstrong was to recognize the importance of investing in the context in which children can grow and thrive! That is the base for the lifetime health of a whole society.

Evidence built over more than 2 centuries points to the importance of context and early health investments before illness occurs. The US health investments we see in 2014 do not follow where this evidence points. Eighty-eight percent of the $2.6 trillion we spend on health care goes toward medical services focused on interventions after illness that account for only 10% of premature mortality. By contrast, changing context and promoting the healthy behaviors that account for 50% of health outcomes (the bottom of the CDC impact pyramid) receives only 4 cents on the dollar. This is a remarkable mismatch (Fig. 4).

If improved health at lower cost is our goal, we need to shift our investment from excessive, expensive medical interventions to lower-cost, effective prevention and early intervention. Our low ranking among other Western industrialized nations and the health disparities within our borders clearly call for major change. Analysis and building evidence is one part of making change. However, it is inseparable from the personal journeys in both widening
circles and inward circles that leaders such as Dr Armstrong have followed, and which I believe most of us follow as well. We can each trace our own spiral journeys similar to those that marked the progress of the upstreamist thinkers who came before us.

**EVER-WIDENING CIRCLES: PERSONAL JOURNEYS TOWARD A CONTEXT-BASED PERSPECTIVE**

Far-reaching change does not occur independently from the changes of individual perspectives. It occurs because individuals have pushed their own understanding outward and have brought new knowledge and personal values to their work in improving health. Reflecting on my own career, I can look at the widening circles that created my own understanding of context-based health from the earliest years of my work in medicine.

Two hundred years after George Armstrong, I started my own journey outward to become a doctor. In one sense, I began with an inward focus. My father had been a general practitioner whose office was in our house. My mother audited 2 years of medical school because she was immersed in medicine, but in her era, she could not become a doctor. I thus had my start in a family interested in the medical profession, and I lived in a house where practicing medicine was a family affair. In the 1960s, I could go one step further than women in my mother’s generation, and I became a doctor myself. That decision marked the start of traveling outward into new possibilities.

After attending Dartmouth Medical School’s 2-year program, I complete my medical degree at Columbia University’s College of Physicians and Surgeons. Stepping far outside my familiar world, I elected to spend a 3-month internship at a bush hospital in upcountry Liberia. At Curran Hospital in the late 1960s, one missionary nurse, Esther Bacon, and one doctor, Paul Mertens, provided care to patients, while families took primary responsibility for their loved ones’ well-being as they slept in our hospital, prepared food, and learned what they could do to help their children. This was an approach to health rooted in community as nurse, doctor, and families worked together to ensure that children not only survived but also thrived. Esther Bacon, whose life is documented in the book *An Outlaw for God*, worked not only with families who had patients in her hospital but also with those interested in continuing to build the foundation for health and medical care in their communities. She ultimately created a nursing school for people in the 10 tribes surrounding the hospital. Sadly, she

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**Figure 3.** Why intervening early matters. Reprinted by permission from John Wiley and Sons, Heckman JJ. Schools, skills, and synapses. Economic Inquiry. 2008; 46:289–324.

**Figure 4.** Mismatch between health care spending and determinants of health. Reprinted by permission from NEHI (Network for Excellence in Health Innovation), 2012.
died of Lassa fever, one of the hemorrhagic fever viruses similar to Ebola, in the early 1970s.

Beginning 45 years ago in Liberia, the outward trajectory of my journey took me literally to the other side of the world and then back home. Recently, Liberia’s Ebola epidemic has propelled ZorZor, where I worked, into the spotlight as one of the regions most affected. Feeling so connected to the spirit and suffering of Liberians during this crisis is a result of the imprinting experiences I had at the onset of my career. These experiences in Liberia also dovetailed with other imprinting experiences in New York City as I began to practice medicine. I spent a summer at Lincoln Hospital in the South Bronx attempting to reduce the problem of so-called ‘boarder babies.’ These babies were growing up in the hospital because their parents could not provide appropriate care, and the agencies tasked with finding them a home failed to do so. One child I met had lived at the hospital for 7 years. She never knew that sticks of butter existed, only the foil-wrapped butter pats that came with hospital food. Although hospital staff cared for these children as best they could, they were not equipped to create a home environment for children, and without this home environment the children would not thrive. To solve the South Bronx problem, we needed to look beyond medicine because the answers lay in the community, not on the pediatrics ward. It was the inverse of Liberia—a place with a family and community network so strong that it extended into the hospital.

My experience at Lincoln Hospital was part of summer projects organized by the Student Health Organization (SHO). Founded by a group of activist physicians, the SHO proposed ways to foster health by empowering the community to take charge. They promoted solidarity with the surrounding community in the South Bronx. Within this organization, we saw upstreamists at work before the term “upstreamist” even existed. SHO leader Dr Fitzhugh Mullan’s timeless book, White Coat, Clenched Fist, originally published in 1976, was reprinted in 2006 because of its salience today.12

**BRINGING THE COMMUNITY TO THE HOSPITAL—BRINGING THE HOSPITAL TO THE COMMUNITY**

In the 1960s and 1970s, another area of activism and change was in how New York City approached care of juvenile offenders and incarcerated youth. Adolescent medicine visionaries Iris Litt and Michael Cohen established a comprehensive program for incarcerated young people at Spofford Juvenile Center. Spofford served as a facility for children in trouble with the law and deemed to be CHINS or PINS (Children or Persons in Need of Supervision), or, if involved with more serious crimes, “juvenile delinquents.” Society at large waved back and forth between viewing the Spofford kids as the most dangerous criminals in the city and viewing them as neglected and abused kids who deserved all the treatments and services they had lacked in their earliest years. I first rotated through the Spofford program as part of my fellowship in adolescent medicine at Montefiore Medical Center.

Montefiore was a legendary academic health center with a commitment to addressing health in context. Their director—another visionary, Dr Martin Cherkasky—viewed the hospital as a social instrument, a force within its community with duties lying outside the hospital walls.14,15 As staff members, we went to where people needed us, and we worked with them in their environment, even if that meant going to jail. Spofford was one of Montefiore’s community branches, and when I joined Montefiore as a junior faculty member, I returned to Spofford to serve as the medical director.

At the detention facility, our focus always remained on the context shaping health and how that context might be improved. We were among the first to call for national standards for juvenile detainees, then contributed to the content of these new guidelines.16 We conducted clinical research highlighting the unique—and previously undocumented—problems of marginalized youth, including detainees. We provided excellent care to children and youth, all within the (locked) walls of the detention center. Even our infirmary rounds reflected a wider view of social determinants of health. We made medical rounds with a lawyer and an ethicist in addition to nurses, doctors, and social workers. As a team, we dealt with questions such as how to respond to a judge’s request that we take dental records not for dental treatment but to use as evidence of whether a child bit someone. We considered how medical conditions might aggravate behavioral problems. For example, kids who are not able to see well will act out in class. Considering these kids’ health meant not only treating them in the infirmary but also understanding how health issues played a part in what brought them to Spofford and in how they might leave in better physical, psychological, and social health.

**LEADERSHIP IN HEALTH BEYOND THE MEDICAL SYSTEM**

The search for root causes that informed much of our work at Montefiore soon led our faculty to concern over HIV/AIDS in the adolescent population. Although it seems like an obvious concern today, at the beginning of the epidemic, most observers focused on where the infection was most visible—in adults in their 30s and 40s, and in newborn babies. We knew, though, that HIV symptoms could take up to a decade after first infection before they appeared, so focusing on patients only at the time when they presented symptoms would not head off the crisis. In partnership with my husband, Ralph Dell, we created statistical models that verified our intuitive concern, published in a paper titled “AIDS in Adolescents: A Rationale for Concern.”17 The analogy of a whale was used to describe the emerging epidemic. Most watchers were focused on the tail of the whale as it dived underwater, but our concern was with where the whale was heading—the unseen, underwater portion. It was heading straight toward the adolescent population.
In 1987, Montefiore formed a group to highlight and address the less visible threat and opened the doors of the first-ever comprehensive adolescent HIV/AIDS program. I served as the founding director. We had not yet identified any HIV-infected youth, but we knew it was only a matter of time. We also knew that prevention would be the key to the country’s fight against AIDS. We received a large grant from the CDC based on our models and our approach. We had a chance to put our context-based, community-involved perspective on medicine to work in a time of national crisis.

My experience at Spofford had meant bringing a health perspective into a correctional environment—bringing the hospital into the community—but it soon became clear that this new fight against HIV/AIDS would require going far beyond the medical system. Our program at Montefiore quickly grew into the largest adolescent HIV program in the country (and it remains so today, under the expert leadership of Donna Futterman). I was propelled from the safe and known world of health care into the wider world of social policy, education, and politics. I took a major step outward in that world beyond health care when New York City’s education chancellor appointed me to the Board of Education AIDS curriculum advisory committee. New York had one million school-age children at that time, and the committee was divided on what response to take.

With the leadership of Board of Education staff member Jill Blair, we pushed for comprehensive education that included age-appropriate learning about sexual development and HIV transmission starting in the early grades. We recommended far-reaching changes, calling for not only curriculum changes at the high school level but also condom availability. The committee voted 5 to 4 in favor of this strategy.

Our committee’s recommendations generated enormous controversy in the Board of Education hearings and in the media. Banner headlines announced the approval of the condom availability program. Although some of the media hype had negative results (including death threats to some committee members), we also quickly learned about the potential positive side of how media can play a critical role in forming social policy. Media coverage on TV and in print brought the problem of HIV/AIDS to the nation’s—and the world’s—attention when Magic Johnson made front-page news with his own HIV diagnosis. This startling announcement generated enormous interest and awareness of our work, and it propelled the issue of HIV in adolescents as a top news story for a surprisingly long period of time.

We soon developed new strategies for using media. At the time, government materials regarding HIV/AIDS were timid. They were not specific about the ways in which HIV was transmitted; nor did they provide the specifics of prevention such as condom use by young people. They favored the “Just Say No” abstinence-only message. In response, through a new partnership with Consumer Reports Books, I coauthored, with Theresa Foy DiGeronimo, the short but punchy book, AIDS: Trading Fear for Facts—A Guide for Young People, which presented a bold, factually accurate, necessary perspective on HIV and AIDS.

This timely volume sold over 100,000 copies, reflecting the vacuum at the time in practical, useful, accurate information for young people and the adults who cared about them, including teachers, parents, and health professionals.

Our guide empowered young people to confront HIV/AIDS in their lives, at home, in school, at camp, and in the playground. We provided lists of questions young people could ask their doctor. These questions had the additional benefit of educating doctors, teachers, and parents by including information and resources they may not have considered. Just as Dr Armstrong gave mothers the tools to look after their infants, we gave young people the tools to look after their own health and be their own advocates. We saw young people as assets in helping halt the spread of AIDS. They were not simply patients to be treated or, worse, the source of the next wave of the epidemic; they were the generation that could contribute to the solution, containing and ultimately reversing a worldwide pandemic.

**BRINGING CONTEXT TO NATIONAL HEALTH STRATEGIES**

The next step on my spiral journey outward away from New York City propelled me into national reform efforts in Washington, DC. When President Bill Clinton entered office in the early 1990s, his administration elevated health reform to a top priority. My entry point into this world of national health policy came through a Robert Wood Johnson Foundation (RWJF) Health Policy Fellowship. The RWJF program brought health professionals to Washington, DC, placing us in key staff positions on the Hill while introducing us to a cadre of influential people in policy and politics. My placement was with the powerful Senate Finance Committee, which had jurisdiction over major components of the country’s health system, including Medicaid and Medicare funding, as well as academic health center financing. Their jurisdiction also included social issues such as welfare reform—topics directly related to the social determinants of health.

During my time on the Senate Finance Committee, we did not pass the breadth and depth of reform legislation the White House and others had hoped for. Still, that time marked an important shift in the national conversation, as well as my own work. In New York, I had combined my experience of the value of context-based health with research and data for specific issues—treatment of juvenile detainees and the future path of the HIV epidemic. Basing policy recommendations on research findings and translating them for larger impact contribute to the context of health on a wider scale. For example, shaping national standards for treatment of detainees, enabling adolescents to participate in National Institutes of Health studies of HIV, and elevating awareness into the national and international arena were features of this period of work.

Continuing on the path of linking research to policy, I was honored to serve as the executive officer of the Institute of Medicine (IOM) at the National Academies (1995–1998).
IOM reports and analyses ran the gamut from recommended dietary allowances for nutrient requirements to guidance on the future of public health, including the blockbuster report, *To Err Is Human*, that launched a movement in patient safety, including prevention of infection and medical errors. The IOM continues on the forefront of translating research to informing policy, as exemplified by the current IOM roundtable on population health.

Private foundations, in addition to research centers, also proved to be major players influencing the national conversation on health and wellbeing. RWJF, which first brought me to Washington, DC, has helped enlarge the nation’s understanding of health and health care throughout their 40-year history. Just as earlier imprinting experiences stayed with me, I have also stayed involved with RWJF through my career, including as a mentor to a new generation involved in health and medicine. In 1998, my spiral journey moved into the world of these philanthropic foundations when I left IOM to become president of the William T. Grant Foundation. The Grant Foundation supports research to improve the lives of young people. Their board and staff adopted a framework elevating the role of young people in shaping their own well-being and identifying supports to enlarge opportunities for youth development—an assets-based approach. One example of this approach was our collaboration with the White House when we cosponsored the White House Conference on Teenagers: Raising Resourceful and Responsible Youth, moderated by the then-first lady, Hillary Clinton (Fig. 5).

Previous White House conferences had focused on underage drinking and drug use—examples of problem behaviors. They represented an approach characterized by focusing on problems and deficits. This White House reframed the issues to focus on how to create an environment of opportunities where young people matter. We brought together young people, families, researchers, and policy makers with community organizations to highlight the assets-based approach. Our approach focused on how young people contribute to their communities and how they could build skills to contribute more in the future. Just like the upstreamist doctors who searched for root causes that precede illness, and like our earlier work in HIV/AIDS, this opportunity-focused intervention could actually avert problems, not merely ameliorate them.

Conversations that were starting 20 years ago, when I first arrived in Washington, DC, have continued to grow and evolve into a broader approach to health. The RWJF’s recent shift in 2014 from considering “health” and “health care” to their newly articulated mission of “creating a culture of health” puts the social determinants of health front and center in improving health and well-being. Their Commission to Build a Healthier America issued a report in 2012 calling for a “seismic shift in how we approach health.” They observed that although the United States spends more than any other country on health care, it does so because its citizens are unhealthy, not because it is investing in staying healthy. The problem is especially acute for Americans living in vulnerable communities. The changes the commission calls for add up to focusing on assets, on the community role in health versus a narrower focus on the role of health institutions, and on early investments in children. They have clearly signaled a new approach and further perspective on health in America. RWJF is one example of how the conversation shifts. Now, we also see the political conversation shifting, especially in Vermont, which became the next phase of my spiral journey.

**Figure 5. Karen Hein and Hillary Clinton at the White House conference on raising responsible and resourceful youth.**

PROGRESS ALONG THE INWARD SPIRAL

Following Gandhi’s saying, “My life is my message,” after serving for 5 years as president of the William T. Grant Foundation, my husband and I wanted to unify and simplify our lives in the place we felt most rooted: our home in Vermont. We moved there full time in 2003 after commuting back and forth over the previous 4 decades.

The power of a spiral metaphor is the ability to move simultaneously inward and outward. This bidirectional movement characterizes the current phase of my life and my life’s work. Even as we were sinking our taproot deeply into our Vermont home and community, I began serving on nonprofit boards related to global health that propelled me into the world of displaced people. Through membership on boards of the International Rescue Committee (IRC) and CHildFUnd International, I became immersed in the plight and lives of people marginalized for a variety of reasons, including natural disasters, such as the tsunami in Southern India, drought and related conflicts in Africa, and hardships resulting from political and economic struggles in Southeast Asia and Central Asia. Through these outstanding international nongovernmental agencies, we evaluated efforts to improve conditions for children and youth, families, and communities. I directly experienced the situations in Rwanda, the Democratic Republic of the Congo, Tanzania, and Malawi, as well as in the refugee camps in Uganda, along the Thai–Burmese border, and in Mongolia. All of this work deepened and broadened my understanding of health in context.
The inward progress along the spiral allows us to apply broad perspective gained through widened circles to our work closer to home. In 2011, the opportunity to contribute to major changes in health and health care arrived at our doorstep in Vermont. That year, Vermont passed Act 48, a visionary law that adopted the sort of comprehensive approach to reform that we had worked for at the congressional level 20 years earlier. Act 48 emphasizes primary and preventive care with the goal of creating a seamless system. It calls for a publicly financed system enabling all Vermonters to have access to affordable, effective health care. As part of achieving this system, the act also addresses the need for changes in payment to reward value rather than volume. The ultimate objective is to improve health while moderating costs. Notably, the new law begins with 14 principles as the basis for our actions to ensure access, cost containment, transparency, accountability, and partnership between Vermonters and those entrusted with their care. As the citizens’ campaign supporting Act 48 started, these principles “put people first.”

The Green Mountain Care Board (GMCB) oversees many of the parts of the reform efforts outlined in Act 48 through a board of 5 people with supporting staff (Fig. 6). At this time, I am completing my 3-year term as one of 5 founding members appointed by Governor Peter Shumlin. The board is tasked with responsibilities including regulating insurance rates and hospital budgets, promoting innovation by fostering projects that try new approaches for both delivery system and payment methods, and evaluating the progress of reform within the state. Vermont’s new law represents an opportunity to put pieces together into a system of care based on evidence of what works.

It was a controversial decision for Vermont legislators to create such comprehensive reform and to place so much oversight and responsibility in a 5-person independent board. The legislature wisely argued that achieving true reform requires a comprehensive approach as well as a corresponding leadership group with enough autonomy and nimbleness to enact it. Placing this authority in GMCB allows us to deal with a wide range of thorny issues, make real progress, and so quickly enough that legislators and Vermonters can receive timely decisions and evaluations as the process of reform unfolds. We do not work in isolation. Transparency is key to our progress. We make all of our decisions in public, we have a superb staff, and we collaborate with agencies throughout state government. This experiment, viewed as an IOM “Learning Health System,” is open to the scrutiny of all within the state as well as the nation.

Although Vermont began its work on Act 48 only 3 years ago, we can already see progress from both this act and the previous legislative actions on which it builds. The preexisting Vermont Blueprint for Health established a “program for integrating a system of health care for patients, improving the health of the overall population, and improving control over health care costs by promoting health maintenance, prevention, and care coordination and management.” The blueprint emphasizes community and the health of a whole population. Results from projects started under this program inform work moving forward under Act 48. For example, the blueprint encompasses enhanced primary care with the addition of community health teams and a new spoke-and-hub arrangement to address the growing problem of opiate addiction in the state and in the nation. We are continuing the trajectory toward integrated health that these types of programs began. Now, we have launched a statewide accountable care organization that includes all payers (Medicaid, Medicare, and commercial insurers) and encompasses academic health centers, all the hospitals in the state, some federally qualified health centers, and physician practices. Three-quarters of Vermonters are in National Committee for Quality Assurance–certified medical homes for their primary care. We are getting closer to our health information technology integration across providers, insurers and regulators. The GMCB is leading statewide work on transparency in cost and quality performance.

In thinking about how this work brings Vermont closer to a model of full context-based health, we can track the state’s progress along stages described by Neal Halfon’s 3-step model of the evolution of health systems. We have progressed from an acute care system (1.0) mode to the current coordinated seamless health care system (2.0) and have laid the groundwork for the final stage of having a community-integrated health care system (3.0) (Fig. 7). The community-integrated system will have brought us successfully from individual considerations and care outward to care for groups of people. Within our current structure we have groups supporting this progress, such as the Population Health Work Group that I co-chair as part of Vermont’s State Innovation Model funded by Centers for Medicare and Medicaid Services’ Center for Medicaid and Medicare Innovation.

Vermont has created a framework for achieving context-based health, aligned the governmental system behind it, and launched specific initiatives fitting within that.

**Figure 6. Vermont’s Green Mountain Care Board reform oversight by regulation, innovation and evaluation. Reprinted with permission from GMCB executive director Susan Barrett.**
A final piece in the foundation for reform has been creating an evaluation system that reflects the principles behind this reform effort. We have created a high-level dashboard to look at the impact of reform on Vermonters’ lives. We selected the framework put forth in the 1990s through the Vermont Well-being Reports, which take a lifelong perspective from infancy through Vermonters’ final years, including many social and economic factors. In the case of GMCB, we adjust the framework to reflect the current attempt to integrate “health in all policies” on a state level. This integration requires reaching beyond departments traditionally tasked with health care to consider additional contributions to health, such as the Agency of Transportation building bike paths, the Agency of Agriculture investing in nutritious school lunch programs, and the Agency of Education developing health education. These sources of data create an evaluation system that is comprehensive across the life-time of a Vermonter and across the many factors influencing health over that lifetime.

**CONNECTING BOTH INWARD AND OUTWARD FROM VERMONT**

The title of a recent *New York Times* commentary posed the question, “As Vermont goes, so goes the nation?” Vermont has been on the cutting edge of reforms nationally, acting as an incubator for ideas with relevance elsewhere. Beyond Act 48, programs like the National Improvement Network Partnership, with leadership by Judith Shaw of the Vermont Child Health Improvement Program, and Building Bright Futures, ably led by Paula Duke Duncan, are examples of national programs piloted in Vermont. Their success demonstrates the importance of using states as a learning laboratory for fostering national progress in improving health and moderating cost.

The pace and degree of progress in Vermont has relied on foundation and federal investments coming into the state. Federal investments have promoted integration of health information technology systems, supported Vermont’s Blueprint for Health, and led delivery system reforms. As one of the first 6 states with a State Innovation Model grant, Vermont is testing payment reform methods. National-level decisions to make these funds available set the stage for Vermont to create the state-level change that may serve as a model for others.

**THE NEW MILLENNIUM’S VERSION OF GEORGE ARMSTRONG AS NEW LEADERS Emerge and Travel Outward**

The path of Bayartsetseg Jigmiddash, nicknamed Bayaraa, the woman who brought me to Mongolia, shows...
the power of the spiral journeys of the next generation of leaders as they emerge. She too has traveled in ever-widening circles: the Mongolia of her childhood, where she stood in line as a kid to get bread; becoming a lawyer in her nation; then continuing her spiral journey further abroad through global fellowships to her current key position in the Mongolian Ministry of Justice. She came first to the United States from Mongolia to study at the Columbia Law School in New York and then to earn her master of law degree from Harvard. She has worked for a Soros-supported Open Society Forum in Ulaan Baatar, providing information and assistance to Mongolians as they learned about and adopted democratic principles and practices. Now she is the top civil servant in the Ministry of Justice of Mongolia—the first young woman to oversee departments that include homeland security and border security (Fig. 8). Last year she returned to the United States for her first address to the UN general assembly. She is a true example of a person living up to her full potential and helping others so that they might do the same.

Bayaraa and I met over a decade ago at a conference in Brazil on youth development sponsored by the William T. Grant Foundation. After traveling to Mongolia with a group of pediatricians to assist the Children’s Hospital in Ulaan Baatar with modernizing their training and care, I returned several more times, working with Bayaraa and others on a wide array of public health and health professions education surveys and projects. In Mongolia, health professions education is adopting an interdisciplinary team-based approach. Pharmacists, fieldshers, physicians, nurses, and dentists all receive training through a core curriculum in their preclinical years. To create their system, Mongolia selects the best elements of curricula and training from around the world. They have emphasized population health, prevention, and public health, just as we seek to incorporate these aspects in Vermont as part of our context-based health model. As in Vermont, there is currently an alignment of principles and goals starting at the top, with the elected governor and state legislature and the appointed GMCB working with state agencies, communities, stakeholders, and Vermonters. Policy makers cultivate transparency and ask of each policy they pursue whether it will create opportunities for Mongolians to thrive. Work in Mongolia helps me think about the systems-based approaches needed in Vermont and in the rest of our country. It reinforces the idea that the only way to improve health is to look at health in context.

Bayaraa and her work in Mongolia also demonstrate the importance of the inward turn of the spiral. Bayaraa’s first act at the Ministry of Justice was addressing the new and growing problem of domestic violence, including abused children, in Ulaan Baatar as rural nomads have migrated to the capital in the hope of finding work in the new economy. Although a relatively small group for someone tasked with national concerns, these abused kids represented a much larger social problem. Here the traditional nomads encountered cascading effects of negative change: the breakdown in family ties, a high unemployment rate, particularly for men, the introduction of alcohol, and the growth of so-called ger compounds, where traditional yurts are grouped tightly together with inadequate sewage treatment and electricity, and only wood stoves for heating, which in turn produces severe air pollution.

Bayaraa helped create protection services for victims of domestic violence, including women and children, as well as organizations in Ulaan Baatar that could help them resume their education, health, and development, rather than become a marginalized group. She started with these few children because, as she said, if she could show that she cared about kids as a lawyer and as an official in the Ministry of Justice, then that would demonstrate the rule of law and the importance of changing the social determinants of their future. Perhaps Bayaraa could be characterized as the new millennium’s version of George Armstrong!

Bayaraa, you, and I each have traveled far into terra incognita to learn. We have each applied the knowledge gained from extending ourselves well beyond our normal sphere of experience to come full circle as we reflect and integrate this outward journey with the more internal one. Bayaraa gathered what she observed in democratic societies around the world and brought this knowledge to Mongolia, an emerging democracy. Mongolia has borrowed the best of models seen elsewhere. My journey took me to the Bronx, Liberia, Washington, DC, refugee camps in East Africa and Thailand, and back home again to Vermont. Incorporating elements along the way is a vital part of your and my work. Differences between Mongolia and America are stark: Mongolia has yaks, felt gers or yurts, shamanism, and fermented mare’s milk compared to America’s consumer culture, great disparities in wealth, and political approaches to solving national and international crises. The traditions, people, and lands of Mongolia resonated with me, providing important lessons. Bayaraa is part of our family. We have her photos displayed with those of our children and relatives. I brought reminders of Mongolian culture back to Vermont—the goats, the ger filled with Mongolian furniture, and braided ropes made of horsehair, camel hair, and yak hair. It isn’t only a personal connection to work done in a place that creates change but

Figure 8. Bayartsedseg Jigmiddash (Bayaraa) has worked as a legal advisor to the president of Mongolia, Tsakhia Elbegdorj.
also the connection to people, elements of another place that we absorb, and the ultimate values we bring to our work and life’s work in health.

CONCLUSION: THE SHEPHERDESS PATH

As I enter my 71st year and reflect on the spiral movement both inward and outward, I am also part of literally wearing our journeys on our backs as we discover yet more connections and meaning. The jacket I wore to deliver the George Armstrong lecture was created by artist Regina Holliday, who created it as part of her Walking Gallery of Healthcare.30 She began the Walking Gallery after her husband died, quite young and unexpectedly. She invites physicians to wear a jacket with their story, painted on jackets for all to see as part of the Walking Gallery.30 Physicians willing to share their own stories, integrating both the inward and outward perspectives of our lives.

The concept behind the Walking Gallery mirrors where our broad perspective of health is moving and where reforms such as those in Vermont are pointing. The Walking Gallery asks that physicians reflect on their personal experience and join with the many people who shape our communities’ health. Individuals actively participate in the journey and in their own care; we all become active participants in creating health. Similarly, changing our understanding of health relies on drawing from individual experiences to provide insight into broad change. It relies on everyone acting together in an environment of transparency. In this case, we offer transparency by our stories painted on jackets for all to see as part of the Walking Gallery.

I invite all of you to join the spiral journey both outward and inward as we work to create a wider and deeper context for health in the country, in the world, and in our own lives.

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